

Having thus described the preferred embodiment, the invention is now claimed to be:

1. A method for processing raw application data including a plurality of occurrences of an object, the method comprising:

receiving a stream of the raw application data, including object raw data, which represents the object, and other raw data, into a job inspector;

5 scanning the stream of the raw application data within the job inspector for identifying each of the occurrences of the object;

transmitting the object raw data to a cache manager; and

caching data representing the object raw data as a function of the object occurrences detected by the job inspector.

2. The method for processing raw application data as set forth in claim 1, further including:

converting the object raw data into object raster data;

5 replacing each of the occurrences of the object raw data in the raw application data with an identifier associated with the object raster data; and

converting the raw application data into raster data, the identifiers within the raw application data being replaced with the object raster data.

3. The method for processing raw application data as set forth in claim 2, wherein the transmitting and caching steps include:

identifying a location within the cache corresponding to the object raster data according to a hashing function.

4. The method for processing raw application data as set forth in claim 3, wherein the caching step further includes:

if a size of the object raster data is greater than a size of the object raw data, transmitting both the object raster data and the object raw data into the cache.

5. The method for processing raw application data as set forth in claim 3, further including:

performing the steps of receiving, scanning, transmitting, and caching in parallel.

6. The method for processing raw application data as set forth in claim 1, wherein the caching step includes:

converting the object raw data into object raster data; and  
transmitting the object raster data into a cache.

7. The method for processing raw application data as set forth in claim 1, wherein the caching step includes:

identifying objects used in the most distant future.

8. The method for processing raw application data as set forth in claim 1, wherein the caching step includes:

determining a frequency of usage of the object.

9. The method for processing raw application data as set forth in claim 1, wherein the caching step includes:

evaluating a processing cost of the object.

10. The method for processing raw application data as set forth in claim 1, wherein the caching step includes at least two of:

identifying objects used in the most distant future;  
determining a frequency of usage of the object; and

5 evaluating a processing cost of the object.

11. A system for processing raw application data including a plurality of occurrences of an object, comprising:

a job inspector which receives a stream of the raw application data, including object raw data which represents the object, and other raw data, the job  
5 inspector scanning the stream of the raw application data for identifying each of the occurrences of the object;

a cache manager, which receives the object raw data from the job inspector; and

a cache for storing data representing the object raw data as a function of  
10 the object occurrences detected by the job inspector.

12. The system for processing raw application data as set forth in claim 11, wherein the job inspector replaces each of the occurrences of the object raw data in the raw application data with an identifier associated with the object raster data, the system further including:

5 a raster image processing device for converting the raw application data into raster application data and, therefore, converting the object raw data into object raster data; and

an assembly component which replaces the identifiers within the raster application data with the object raster data as the raster image processing device  
10 converts the raw application data into the raster application data.

13. The system for processing raw application data as set forth in claim 11, wherein:

the cache manager sends a control signal to a raster image processing device for causing the raster image processing device to convert the object raw data  
5 into object raster data; and

the cache manager transmits the object raster data into the cache.

14. The system for processing raw application data as set forth in claim 12, wherein:

the assembly component retrieves the object raster data from the cache when replacing the identifiers; and

5 the cache manager identifies a location within the cache corresponding to the object raster data according to a hashing function.

15. The system for processing raw application data as set forth in claim 14, wherein if a size of the object raster data is greater than a size of the object raw data, the cache manager transmits both the object raster data and the object raw data into the cache.

16. The system for processing raw application data as set forth in claim 14, wherein the job inspector, the cache manager, the cache, and the assembly component operate in parallel.

17. The system for processing raw application data as set forth in claim 11, wherein the cache manager deletes data in the cache according to a most distantly needed caching strategy.

18. A method for printing original data including variable and constant objects, the method comprising:

identifying the constant objects within the original data;

transmitting the original data associated with the variable objects to a  
5 storage device;

transmitting the original data associated with the constant objects to a  
cache manager;

for each of the constant objects:

if a cache is full, deleting previously cached data according to a  
10 most distantly needed caching strategy;

if the cache is not full, storing data representing the constant  
object into the cache; and

assembling final raster data from the variable objects in the storage  
device and the constant objects in the cache.

19. The method for printing data including variable and constant  
objects as set forth in claim 18, further including:

replacing the constant objects in the original data with identifiers; and  
storing the identifiers in the storage device.

20. The method for printing data including variable and constant  
objects as set forth in claim 19, wherein the assembling step includes:

substituting the data representing the constant object, which is stored in  
the cache, for the identifiers.

21. The method for printing data including variable and constant  
objects as set forth in claim 18, further including:

transmitting the final raster data to an output device.